

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A chitosan/acidic ~~biopolymers~~ biopolymer hybrid fibers ~~fiber~~ in which the an inner part of the ~~fibers~~ fiber comprises chitosan or salts thereof, and the surface of the ~~fibers~~ fiber ~~are~~ is covered by a complex of chitosan and a biodegradable acidic ~~biopolymers~~ biopolymer and which retains the ~~form~~ shape thereof when the ~~fibers~~ fiber ~~are~~ is soaked in DMEM medium (Dulbecco's Modified Eagle's Medium) at room temperature for 2 weeks.
2. (Currently Amended) A ~~The~~ chitosan/acidic ~~biopolymers~~ biopolymer hybrid fibers ~~fiber~~ of Claim 1 in which the acidic ~~biopolymers~~ biopolymer is selected from the group consisting of ~~hyarulonie~~ hyaluronic acid, alginic acid, chondroitin sufate, dermatan sulfate, heparin, heparin sulfate, keratin sulfate and polyglutamic acid.
3. (Withdrawn) A method for preparing the fibers of Claim 1 which comprise the steps of:

1) dissolving chitosan in an aqueous acid solution to prepare an aqueous solution of chitosan salts;

2) wet spinning the aqueous solution of chitosan salt using alkaline earth metal salts as coagulants to form fibers;

3) immersing the fibers in a solution of biodegradable acidic biopolymers to react chitosan with acidic biopolymers on the surface of the fibers to form chitosan/acidic biopolymer hybrid fibers;

4) optionally stretching the hybrid fibers; and

5) treating the fibers with bases, di- or more-basic inorganic acids or salts thereof, tri- or more-basic organic acids or salts thereof.

4. (Withdrawn) A method for preparing the fibers of Claim 1 which comprise the steps of:

1) dissolving chitosan in aqueous acid solutions to prepare aqueous solutions of chitosan salt;

2) wet spinning the aqueous solution of chitosan salt using bases, di- or more-basic inorganic acids or salts thereof, tri- or more organic basic acids or salts thereof as a coagulant to form fibers;

3) immersing the fibers in a solution of biodegradable acidic biopolymers in the surface of the fibers to form chitosan/acidic biopolymer hybrid fibers; and

4) optionally stretching the hybrid fibers.

5. (Currently Amended) ~~Three~~ A three dimensional scaffolds ~~scaffold~~ for animal cells comprising ~~the~~ fibers of in accordance with Claim 1.

6. (Currently Amended) ~~Three~~ The three dimensional scaffolds ~~scaffold~~ of Claim 5 in which the animal cell is chondrocyte.

7. (Currently Amended) ~~Three~~ The three dimensional scaffolds ~~scaffold~~ of Claim 5 in which the animal cell is fibroblast.

8. (Currently Amended) ~~Three~~ The three dimensional scaffolds ~~scaffold~~ of Claim 5 in which the animal cells are undifferentiated cells.

Claims 9-15 (Cancelled).

16. (New) A bi-polymer fiber comprising chitosan and an acidic biopolymer in which the inner part of the fiber comprises chitosan or a salt thereof, and the surface of the fiber is covered by a complex of chitosan and a biodegradable acidic biopolymer,

the fiber being the product of:

1a. wet spinning an aqueous solution of chitosan salt obtained by dissolving chitosan in an aqueous acid

solution, using an alkaline earth metal salt as a coagulant to form a wet spun fiber;

2a. immersing the wet spun fiber in a solution of biodegradable acidic biopolymer to react chitosan with acidic biopolymer on the surface of the wet spun fibers to form a chitosan/acidic biopolymer fiber;

3a. optionally stretching the chitosan/acidic biopolymer fiber; and

4a. treating the stretched or wet spun fiber with a base, di- or more-basic inorganic acid or salt thereof, tri- or more-basic organic acid or salt thereof, or

the product of

1b. wet spinning the aqueous solution of chitosan salt using a base, di- or more-basic inorganic acid or salt thereof, tri- or more organic basic acid or sat thereof as a coagulant to form a wet spun fiber;

2b. immersing the wet spun fiber in a solution of biodegradable acidic biopolymer to react chitosan with the acidic biopolymer on the surface of the wet spun fiber to form a chitosan/acidic biopolymer fiber; and

3b. optionally stretching the chitosan/acidic biopolymer fiber; and

the resultant bi-polymer fiber being capable of retaining the shape thereof when the fiber is soaked in DMEM

medium (Dulbecco's Modified Eagle's Medium) at room temperature for 2 weeks.

17. (New) The fiber of Claim 16 in which the acidic biopolymer is selected from the group consisting of hyaluronic acid, alginic acid, chondroitin sulfate, dermatan sulfate, heparin, heparin sulfate, keratin sulfate and polyglutamic acid.

18. (New) A three dimensional scaffold for animal cells formed of fibers according to Claim 16.

19. (New) The three dimensional scaffold of Claim 18 in which the animal cell is chondrocyte.

20. (New) The three dimensional scaffold of Claim 18 in which the animal cell is fibroblast.

21. (New) The three dimensional scaffold of Claim 18 in which the animal cells are undifferentiated cells.